

A TALE OF AN AIRLINES COMPANY: TOWARDS A MODEL OF STRATEGY FORMULATION THROUGH THE LENSES OF SUSTAINABLE DEVELOPMENT GOAL

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ABSTRACT

Objective: The purpose of this paper is to explore a few insights into the national airlines of Bangladesh (called Biman) and how they can achieve the Sustainable Development Goals (SDG). Further, the paper evaluates the available strategies using IEF, EFE, SWOT, IE & QSPM matrices/techniques as proposed by David & David (2017).

Theoretical Framework: IFE (Internal Factor Evaluation) & EFE (External Factor Evaluation (e.g. input stage), SWOT (Strength, Weakness, Opportunity, and Threats) & IE (Internal and External) matrix (e.g. matching stage), and finally QSPM (Quantitative Strategic Planning Matrix) (e.g. decision-making stage) are used for strategy formulation.

Method: This study applies a mixed-method approach. Face-to-face interviews with the passengers of London-Dhaka-London are conducted, and additionally, the content analysis of relevant newspapers and journal articles is carried out.

Results and Discussion: QSPM finds, that market development (priority-1), offensive strategy (priority-2), and product development (priority-3) are the appropriate strategies for the airline. It would be not easy to generalize the results as the study is based on one public airline company in a particular country (Bangladesh).

Research Implications: This study has both theoretical and practical implications. The study demonstrates how to formulate plans using a quantitative method. The result of this study might be beneficial to Bangladesh's Civil Aviation Authority. The recommendations of this study may help generate profits in Biman.

Originality/Value: This study contributes to the strategy literature. Strategy development processes for any business, including aviation, may be eye-opening.

Keywords: IEF, EFE, SWOT, IE, QSPM, biman bangladesh airline, Sustainable Development Goals (SDGs).

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1 INTRODUCTION

The skill of balancing between a firm's internal resources and the possibilities and challenges posed by its external environment is known as strategy (Grant, 1991). The strategy formulation approach may be broken down into three stages: I the input stage; (ii) the output stage; and (iii) the decision-making stage (EFE, CPM & IEF) ii) the matching stage (SWOT, SPACE, BCG, IE, and Grand Strategy matrix) and iii) the decision stage (QSPM) (David & David, 2017). Any blunder or miscalculation at any step might result in the organization's collapse or peril. Bangladesh's national airline is Biman Bangladesh Airline. In 1972, it began its voyage. The airline's major business is local and international passenger and cargo transportation. If analyze, “we see that the Fare and Freight are approximately same during the fiscal year 2006-2007 to 2017-2018. However, No of Passengers, Income and Expenditure has increased day by day” (Rahman, Ahmed & Faruq, 2020, p. 14). Biman's business and customer services lack suitable and high-quality plans. Every year, the organization suffers significant losses. This organization's recurring issues include a lack of suitable infrastructure, a scarcity of planes, and passenger complaints.

As reported by Dhaka Tribune (2022), Biman Bangladesh Airlines operated with a total of 21 fleets between fiscal years 2011-12 to 2020-21, comprising of five Dash-8, six Boeing 737-800, four Boeing 777-300ER and six Boeing 787-8 Dreamliners during 2022. Between this reporting period (fiscal year 2011-12 to 2020-21) the corporation incurred a total profit of TK 1,000 crore, making a total loss on TK 1,500 crore. Living Biman in a total debt of TK 1,400 crore. Investigating further we found during fiscal year 2011-12 Biman suffered the biggest loss of TK 594 crore (Dhaka Tribune, 2022). The corporation managed to turn the losses into profit during fiscal year 2018-19, reporting a healthy profit of TK 272 crore. However, Biman failed to maintain the success and consistency, as further losses during fiscal year 2019-20 and profits in subsequent 2020-21 were reported. Biman reported a loss of TK 81 crore and profit of TK 158 crore for fiscal years 2019-20 and 2020-21 respectively.



According to the Dhaka Tribune, the airlines made a profit for three years between 2015 and 2017. It lost money again in the 2017-18 fiscal year, before turning a profit of Tk272 crore in FY2018-19, a net loss of Tk81 crore in FY20, and a profit of Tk158 crore in FY21. The number of travellers has dropped considerably since the onset of COVID19. There were around 2.7 million, 2.04 million, and 823,000 passengers in FY19, FY20, and FY21 (through April), respectively. Despite cutting routes, raising ticket prices, sacking employees, and lowering their pay, the national flag carrier has lost around Tk1,500 crore in the last ten years. According to a Biman's Finance Directorate report, the airline accumulated a debt of Tk1,400 crore during the same period while only making Tk1,000 profit. Under the military-backed caretaker administration in 2007 and 2008, Biman profited. Between 2015 and 2017, the airlines also turned a profit for three years. In the 2017-18 fiscal year, it lost money again, then earned a profit of Tk272 crore in FY2018-19, a net loss of roughly Tk81 crore in FY20, and a profit of Tk158 crore in FY21. Since the outbreak, the number of passengers has decreased dramatically. In FY19, FY20, and FY21 (through to April), there were roughly 2.7 million, 2.04 million, and 823,000 passengers, respectively. This organization's recurring issues include a lack of suitable infrastructure, a scarcity of planes, and passenger complaints. The research questions for this study are set as follows: (i) How to find out the best strategy/strategies available to Biman? (ii) what are the strategies available to Biman?

2 THEORETICAL FRAMEWORK

Strategy is the brainchild of Sun Tzu (544-496 BC), the great Chinese General and military philosopher. It is the roadmap for achieving the objectives of the organizations. Tactfully managing and applying the strategies are the subject matters of Strategic Management. There are a number of steps in the Strategic Management Process. Strategy formulation and selecting the appropriate strategy are the vital steps in the Strategic Management Process. The strategy formulation through QSPM has drawn the attention of many researches (Wheelen & Hunger, 2010; Kuan, *et al.*, 2020; Pramitha, Wasito &



Ozali, 2018; Kuan, Yang, & Fei, 2020; Leliga, Koapaha, & Sulu 2019; David & David, 2017). It is Sun Tzu (544 BC-496 BC), a Chinese General and a military strategist who first introduced the world to 'Strategy'. His book *The Art of War* is a combination of various military directions. "The term 'Strategy' is derived from a Greek word 'strategos', which means the generalship-actually direction of military force, as distinct from the policy governing its deployment. Literally, therefore, the word 'Strategy' means the art of the general." (Kzami, 1992, p. 23). Probably the business world has borrowed Sun Tzu's strategies from his book 'Art of war'. Wheelen & Hunger (2010) reveal, Strategic Management has four basic elements. These are: environmental scanning (ii) strategy formulation (iii) strategy implementation (iv) evaluation and control. Management constantly monitor the internal external environments to examine the internal strengths with the external opportunities and threats. The strategies are formulated through the QSPM (Quantitative Strategic Planning Matrix) finally. Kuan, *et al.* (2020) find that David's QSPM model is used in different sectors: Profit and non-profit sectors, govt. and non-govt. organisations. They continued by citing the examples of manufacturing, education, hospitality, food, transportation etc. There are numerous studies (Masoudi & Namdari 2013; . Pramitha, Wasito & Ozali, 2018; Kuan, Yang, & Fei, 2020; Leliga, Koapaha, & Sulu 2019) , where QSPM model/matrix is used to find out the strategies and their priority to any organization's application. Masoudi & Namdari (2013) study on a project-evaluation used QSPM to determine the comparative strategies and conclude, weaknesses and threats can be converted into strengths and opportunities. They also noticed, the order of priority over strategies is dependent on total reform and shift towards stable improvements. Pramitha, Wasito & Ozali (2018) carried out a study on Singapore Airlines with a view to formulating strategies to increase the number of passengers in the airlines. They used IE (Internal & External) matrix, SWOT/TOWS analysis in their study. They found, market penetration and product development are the appropriate strategies for the airlines. Kuan, Yang, & Fei, (2020) show the usage of Strength-Weakness-Opportunity-Threat (SWOT) QSPM to formulate strategies for sustainable performance of a beauty salon in Malaysia. They could find three strategies. Among them, "provide more



service packages with different price options” had the highest Attractive Score. Leliga, Koapaha, & Sulu (2019) used IFE (Internal Factor Evaluation), EFE (External Factor Evaluation), TOWS & QSPM matrices to find out the external and internal factors affecting Milk Products and Nutrition (MPN) sale in Nestle India. The results show that Nestle India should prioritize the application of “Product Development” firstly, followed by “Diversification” strategy.

Arani, *et al.* (2022) conducted various studies in Iran. Hospitals in Iran were the most important locations for the virus's transmission during the COVID-19 epidemic. As a result, they used the quantitative strategic planning matrix (QSPM) matrix to analyze the management of infection control at central governmental hospitals in Kashan, Iran. Environmental health professionals assessed the organization's strengths, weaknesses, opportunities, and risks in the existing materials. Internal factor evaluation (IFE) and external factor evaluation (EFE) matrices were used to identify internal and external factors, which were then prioritized and weighted. The SWOT matrix was then created, the sort of strategy adopted by the firm was assessed, and specialists gave recommendations to enhance the existing position. Finally, to rank the recommended techniques, the attractiveness table was produced and weighted using the QSPM approach. The ultimate score for internal and external elements was 2.6475 and 2.3825, respectively, after identifying 25 strengths, 28 weaknesses, 15 opportunities, and 13 threats. The Conservative strategy was chosen as the ultimate strategy for adopting COVID-19 disease control in the hospitals investigated (WO). Six control strategies were proposed as a result of this. The QSPM matrix was used to assess the priority and attractiveness of each strategy. Finally, as a top priority, the strategy of "structuring the system and supplying and updating equipment and infrastructural facilities" was undertaken.

A research on a furniture firm was conducted by Azaluddin and Jamdia (2022). Cabinets, chairs, and tables are among the items produced by the firm. The Furniture Trading Business is concerned that, due to internal and external issues, the company's sales may drop from 2019 to 2020. The purpose of their study is to learn about the marketing strategy used by the Furniture Trading Company, as well as how that plan uses the Quantitative Strategic



Planning Matrix technique to boost sales at that company. The IFE matrix analysis analysis gave the firm a total score of 22.75, while the EFE matrix analysis gave a score of 18.48. With an IFE matrix of 22.75 and an EFE of 18, 48, the IE matrix findings are in the V quadrant, suggesting that the firm may be able to overcome it through product quality, product market development, and market penetration strategies. The firm can pick from nine tactics based on the SWOT matrix assessment. According to the QSPM matrix, the highest priority alternative strategy is to maintain product quality with a TAS score of 12.

The research on line food delivery services by Dsouza (2021) is based on both primary and secondary data. For IFE and EFE analysis, the focus group approach was used as the major data source, followed by TOWS matrix and QSPM analysis, and secondary data was acquired from journal publications and books. The findings indicate that the company's best approach is to increase food quality, followed by related food diversification.

3 RESEARCH METHODOLOGY

The study is based on both primary and secondary data. The researcher had interviews with several passengers who regularly use the route of London-Dhaka-London. Various journal articles, newspapers information are taken into cogitation. The strengths, weaknesses, opportunities and threat factors are collected from interviews, newspapers and Kuan, *et al.* (2020).

From the Strategy formulation analytical tool, IEF, EFE (input stage), SWOT, IE (matching stage) and QSPM (decision stage) matrices are used to find out the strategies.

In this study we adopted the “Strategy Formulation Analytical Framework” developed by David & David (2017, p 250) to arrive at our findings and lead the discussions. The framework comprises of three stages; 1) stage 1: the input stage, 2) stage 2: the matching stage and 3) stage 3: the decision stage.

In the input stage (stage 1), the framework considers External Factor Evaluation (EFE) factors, Competitive Profile Matrix (CPM) and Internal Factor



Evaluation (IFE) Matrix. The combination of the parameters from stage 1, leads the framework into stage 2 (the matching stage), where David & David (2017) proposed incorporating SWOT (Strengths-Weaknesses-Opportunities-Threats) Matrix, SPACE (Strategic Position and Action Evaluation) Matrix, BCG (Boston Consulting Group) Matrix, IE (Internal-External) Matrix and Grand Strategy Matrix. The depth analysis invested in stage 2 then leads the framework into stage 3 (the decision stage), where the Quantitative Strategic Planning Matrix (QSPM) is to be adopted (David & David, 2017).

Figure 1

The Strategy Formulation Analytical Framework



Source: Adapted from David & David, 2017, p. 250

4 FINDINGS AND DISCUSSION

4.1 IFE & EFE MATRICES

In IFE matrix the strengths and weaknesses cumulative figure is 2.65, which is greater than 2.5 indicating that Biman has the strong internal positions. It has the capabilities to overcome the weaknesses . IFE is 2.65. $IFE > 2.5$ indicates strong internal position (e.g. David & David, 2017), while Biman can take the grab the opportunities over the treats as EFE is 2.55. $EFE > 2.5$ indicates that the company is responding in an average way to existing opportunities and threats in its industry (e.g. David & David, 2017).





4.2 NEWSPAPER FINDINGS

There are many newspaper articles that highlight the anomalies of the airline. A few of them are appended below:

4.2.1 The Dhaka Tribune (13th Feb 2022 by Abdullah Mamun- 50 Years on, Biman Still a Mess), The following irregularities published: ticket mismanagement, poor passenger service, lack of flight schedule & fleet planning, inefficient human resource management, scam in pitot recruitment process, corruption in airline's revenue collection process.

4.2.2 The Daily Prothom Alo-English (11th May 2022-Two aircraft's collision-Biman's Principal Engineer, 4 others suspended), On April 10, a Boeing 737-800 and a Boeing 777-300 ER were damaged at the airport hangar owing to maintenance carelessness. Five government officials were suspended.

4.2.3 The Daily Star (18th May 2022-Biman's Misadventures Continue by Tasneem Tayeb), The following irregularities were published: An experimental commercial flight between Dhaka and Toronto that carried roughly 40 government officials and two MPs for free. On the Dhaka-Toronto route, there were just 36 general passengers, and only six general passengers on the return trip. The flight, which was operated by a Boeing 787-9 Dreamliner, cost the government about Taka 4 crore. Also, it publishes, the leasing of two Boeing 777-aircrafts from Egypt Air, for which Biman had to face a loss of public money Taka 1233 crore. The news also Biman's mismanagement and corruption. Biman does not have any business strategy.

4.2.4 The Daily Star (28th Feb, 2022, Biman's can't Seem to Stay Out of Trouble-Editorial Column), The following irregularities were published: Mismanagement, inefficiency, improper planning, flawed marketing policy, absence of professionalism.

4.2.5 The Daily Prothom Alo-English (13th May 2019-Biman doomed by corruption and inefficiency by Tipu Sultan), The following irregularities were published: Anti-Corruption Commission has sent a report to the state minister of civil aviation identifying eight sectors of Biman that are plagued by corruption. This includes air-craft purchase, leasing and maintenance, cargo and ticket sales, inefficient management etc.

4.2.6 “In 2018-19, it (Biman) carried around 18, 53000 Passengers out of 70,13000 passengers. Rest went 26 foreign and local airlines.” (Islam, 2019). The trend as per trend is 55%-65% (Islam, 2019).

4.2.7 According to Hossain (2019) of the Dhaka Tribune, “The airline faces a litany of corruption allegations for most related sectors, such as cargo transport, aircraft leasing, and ticket sales. The reported corruption could be a major reason the national carrier was not profitable in the previous fiscal year[2016-17]”...

4.2.8 Hossain (2019) continues, “[A inquiry Report finds,] “evidence of corruption in sectors such as aircraft leasing and equipment purchasing. Plus it found that there was cargo account manipulation, there were irregularities in ticket sales, and ghost vouchers were used”... “blocking seats from travel agencies, and making money off this arrangement. The report further states that there is evidence of corruption in the appointment of General Sales

Agents (GSA)”... “When a flight is delayed, regulations dictate that waiting passengers must be given hotel rooms for temporary accommodation. However, the commission found evidence of falsely-prepared hotel bills.”

Table 1

IFE Matrix

Key Internal Factors	Weight (Relative importance of the factor to being successful in firm’s industry)	Rating (1-4): Major strength (4) or Minor strength (3)/Major weakness (1) or Minor weakness (2) for the company for each factors	Weighted Scores
Strengths (S)			
1. Online Reservation	0.10	4	0.40
2. Frequency of flights	0.05	3	0.15
3. Inflight entertainments	0.05	4	0.20
4. Minimum Air Accidents	0.10	4	0.40
5. Inflight Meals	0.10	4	0.40

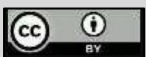


6. Customer Loyalty	0.05	3	0.15
Total (S)			1.85
Weaknesses (W)			
7. Expensive Fare	0.05	1	0.15
8. Corruption	0.05	1	0.05
9. Poor Air Craft Maintenance	0.05	2	0.10
10. High operating costs	0.10	2	0.20
11. Poor time management	0.20	1	0.20
12. Limited brand awareness	0.10	1	0.10
	1.00		
Total (W)			0.80
Total (S+W)			2.65

Table 2

EFE Matrix

Key External Factors	Weight (Relative importance of the factor to being successful in firm's industry) 0.0 (Not important)-1.0 (Very important)	How effectively the firm's present strategies respond to the factor. 4= Response is superior 3= Response is above average 2= Response is average 1=Response is poor	Weighted Scores
Opportunities (O)			
1. More destinations	0.20	3	0.60
2. Private Organisation	0.10	1	0.10
3. Huge cargo service market	0.10	3	0.30
4. Poor Road, rail, water communication	0.05	2	0.10
Total (O)			1.10
Threats (T)			
5. Competitive market	0.20	3	0.60
6. Fuel cost is raising	0.05	3	0.15





7. Political Interferences	0.10	1	0.10
8. COVID 19	0.05	3	0.15
9. New IATA rules	0.05	3	0.15
10. Increase of Air Taxes	0.05	3	0.15
11. Scarcity of aircrafts	0.05	3	0.15
	1		
Total (T)			1.45
Total (O+T)			2.55

So, EFE is 2.55. $EFE > 2.5$ indicates that the company is responding in an average way to existing opportunities and threats in its industry (e.g. David & David, 2017). So, from the above tables, it finds

IFE=2.65, while EFE=2.55

We then incorporated our EFE (External Factor Evaluation) and IFE (Internal Factor Evaluation) results into IE (Internal-External) Matrix (stage 2 of Strategy Formulation Analytical Framework (David & David, 2017) to investigate further.

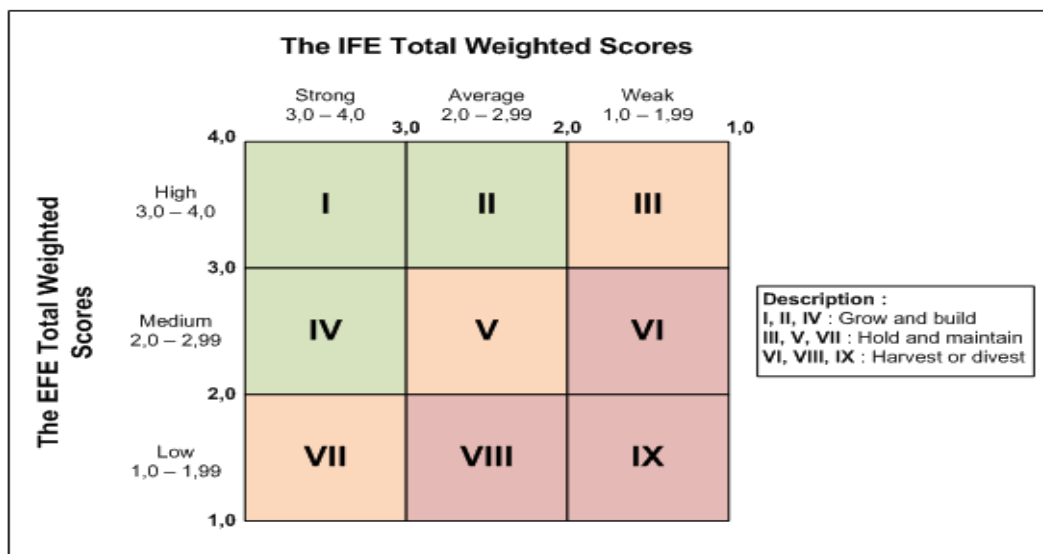
As shown in Fig.-2 (IE Matrix, David & David, 2017), the IE Matrix combines both EFE and IFE scores. Both EFE and IFE scores are issued a scale of 1.00 to 4.00. Where 1.00 to 1.99 interprets as low (cell VII, VIII, IX), 2.00 to 2.99 as medium (cell IV, V, VI) and 3.00 to 4.00 as high (cell I, II, III) in EFE score, and weak (cell III, VI, IX), average (cell II, V, VIII) and strong (I, IV, VII) in IFE scores for the same categories of value.

The combination of the scores from EFE and IFE Matrix and their representing cell then makes recommendations for the portfolio in consideration, Biman in our case.



Figure 2

IE Matrix: Hold and Maintain Region



Source: Adapted from David & David, 2017

As in Figure 2 David & David (2017) suggests, if the organization’s division falls within cell I, II or IV in the IE Matrix the organization should consider growing and building on those division. Whereas for division’s score within cell III, V or VII the organization should consider holding and maintain and for division scoring in cell VI, VIII or IX would recommend the organization to harvest or divest from those divisions.

Figure 3

SWOT: GRAPHIC COORDINATES FOR COMPETENCIES IN SWOT ANALYSIS

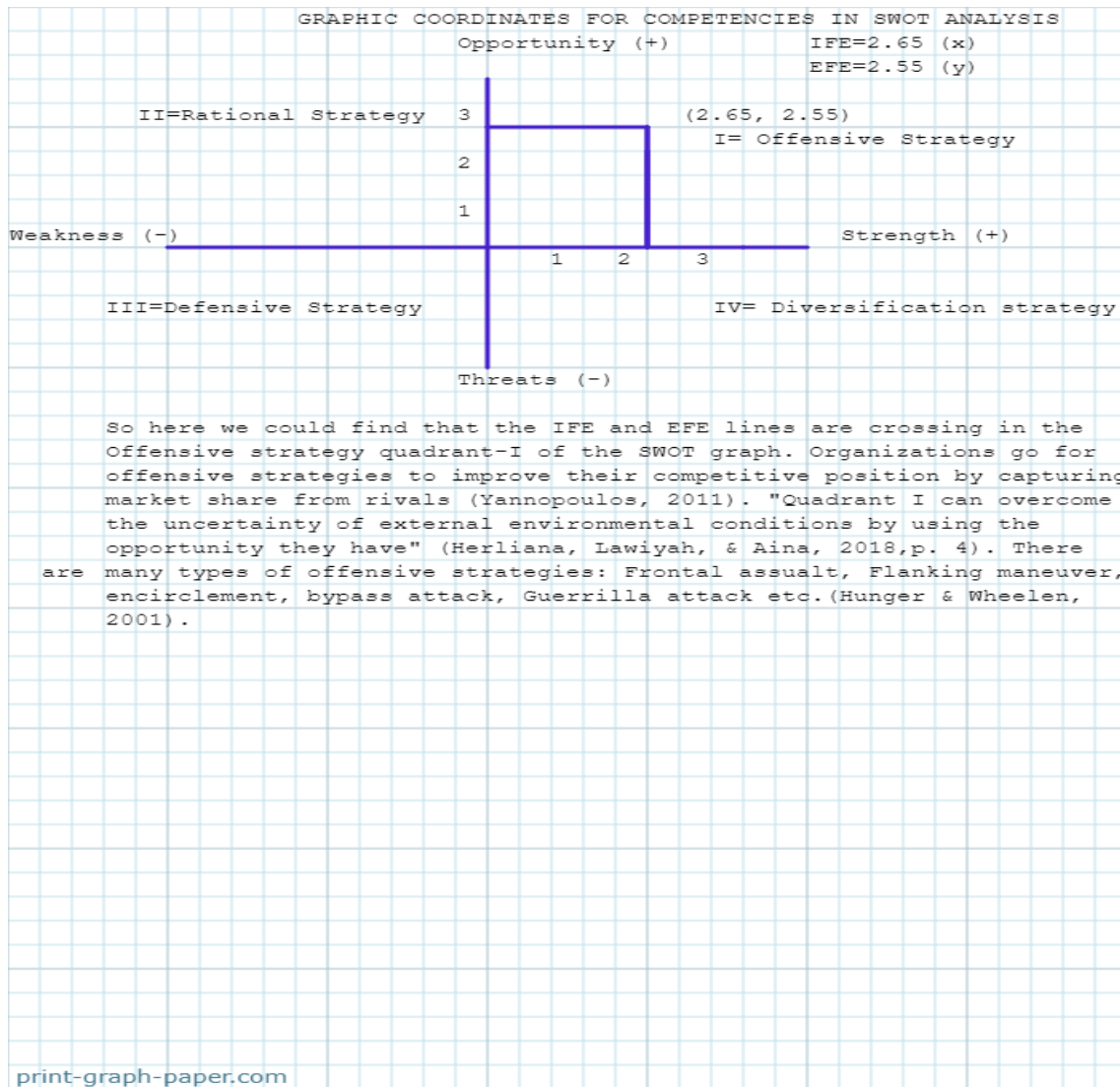




Table 3

SWOT Analysis and Strategies

	<p><u>Strengths (S)</u></p> <ul style="list-style-type: none"> • Online Reservation (S1) • Frequency of flights (S2) • Inflight entertainments (S3) • Minimum Air Accidents (S4) • Inflight Meals (S5) • Customer Loyalty (S6) 	<p><u>Weaknesses (W)</u></p> <ul style="list-style-type: none"> • Expensive Fare (W1) • Corruption (W2) • Poor Air Craft Maintenance (W3) • High operating costs (W4) • Poor time management (W5) • Limited brand awareness (W6)
<p><u>Opportunities (O)</u></p> <ul style="list-style-type: none"> • More destinations (O1) • Private Organisation (O2) • Huge cargo service market (O3) • Poor Road, rail, water communication (O4) 	<p><u>SO Strategies</u></p> <ul style="list-style-type: none"> • Expand to new geographical locations (S6, O1, S2, O3, O2) • Attract new segment of passengers who do not use air services (S6, O4, S2, S3, S4 S5, S1, O3) • Try to operate in unexplored areas of Middle East (S2, O2, O3) 	<p><u>WO Strategies</u></p> <ul style="list-style-type: none"> • Train and develop the employees (W2, O2, W3, W4, W5) • Offer promotional Programs to raise awareness (W6, O2) • Reduce the number of marketing intermediaries in order to have less corruptions. (W2, O2) • In order to have economy of scales, lower the ticket price and cover more destinations and cargo services (W1, O1) • Ensure implementation of on time flight schedules (W5, O2)
<p><u>Threats (T)</u></p> <ul style="list-style-type: none"> • Competitive market (T1) • Fuel cost is raising (T2) • Political Interferences (T3) • COVID 19 (T4) • New IATA rules (T5) • Increase of Air Taxes (T6) • Scarcity of aircrafts (T7) 	<p><u>ST Strategies</u></p> <ul style="list-style-type: none"> • Ensure that the online Reservation does not break down during COVID 19 (S1, T1,) • Reduce unnecessary costs (S3, S5, T2, T5, T6) 	<p><u>WT Strategies</u></p> <ul style="list-style-type: none"> • Follow the IATA rules for aircraft maintenance (W3, T5, T2)



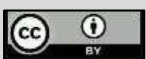


Table 4
Results of Techniques in Matching Stage

Alternative Strategies	SWOT	IE	Total
1. Market Penetration	0	X	01
2. Product Development	X	X	02
3. Offensive strategy	X	X	02
4. Divesture	0	0	0
5. Market Development	X	X	02

Table 5
QSPM

		STRATEGIES					
Key Factors	Weight	Market Development		Product Development		Offensive Strategy	
<i>Opportunities (O)</i>	W	AS	TAS	AS	TAS	AS	TAS
1. More destinations	0.20	4	0.80	4	0.80	4	0.80
2. Private Organisation	0.10	3	0.30	1	0.10	2	0.20
3. Huge cargo service market	0.10	3	0.30	3	0.30	3	0.30
4. Poor Road, rail, water communication	0.05	-	-	-	-	-	-
<i>Threats (T)</i>							
5. Competitive market	0.20	3	0.60	3	0.60	4	0.80
6. Fuel cost is raising	0.05	2	0.10	2	0.10	1	0.05
7. Political Interferences	0.10	-	-	-	-	-	-
8. COVID 19	0.05	2	0.10	1	0.05	1	0.05
9. New IATA rules	0.05	1	0.05	2	0.10	2	0.10
10. Increase of Air Taxes	0.05	1	0.05	1	0.05	1	0.05
11. Scarcity of aircrafts	0.05	3	0.15	2	0.10	1	0.05
Total	1						
<i>Strengths (S)</i>							
1. Online Reservation	0.10	3	0.30	3	0.30	3	0.30
2. Frequency of flights	0.05	3	0.15	3	0.15	2	0.10
3. Inflight entertainments	0.05	2	0.10	2	0.10	1	0.05
4. Minimum Air Accidents	0.10	-	-	-	-	-	-
5. Inflight meals	0.10	-	-	-	-	-	-
6. Customer loyalty	0.05	3	0.15	3	0.15	4	0.20
<i>Weaknesses (W)</i>							
7. Expensive Fare	0.05	3	0.15	4	0.20	1	0.05
8. Corruption	0.05	1	0.05	2	0.10	1	0.05





9.	Poor maintenance	aircraft	0.05	2	0.10	1	0.05	1	0.05
10.	High costs	Operating	0.10	3	0.30	1	0.10	1	0.10
11.	Poor management	time	0.20	3	0.60	1	0.20	4	0.80
12.	Limited awareness	brand	0.10	2	0.20	1	0.20	2	0.20
Total			1.		4.55 (1)		3.75 (3)		4.50 (2)

From the SWOT and IE matrices, it is found that, market penetration is supported one-time by IE matrix, which was not supported by SWOT analysis. Product development, offensive strategy and market development are supported by SWOT & IE tools. The QSPM finds that, market development is occupying the highest score, while offensive strategy and product development are occupying the second and third scores respectively. Ansoff (1954) finds, “Market Development” in which the company attempts to adapt its products present production (generally with some modification in the product characteristics) to new mission” (p. 114). He continues by citing the example of an airline “An airplane company which adapts and sells its passenger transport for the mission of cargo transportation is an example of this strategy” (p.114-115). Market development for Biman is to expand its destination to more geographical locations (national and international). In brief, Market development is a strategy when the firms target a new market with the existing products or services.

Pramitha, *et al.* (2018) in examining the strategy formulation in Singapore Airline could find product penetration and product development are the appropriate strategies for the company. This research result is different, probably different context and different country are the reasons. However, the third priority strategy of this paper focuses on product/service development. Leliga, *et al.* (2019) studied on Milk Products and Nutrition Segment of Nestlé India. Product development and diversification are the formulated strategies. For Biman, ‘diversification’ strategy is not proposed. However, ‘Product development strategy is parallel to this study. Kuan, *et al.* (2020) formulated ‘more service packages with different price option’ strategy, which is contrary to this study.





The interviewees highlighted about the corruption in Biman. Many of them talked about the organized corruption, so-called “*Syndicate*”. Mainly some corrupted employees and the marketing channel intermediates (agents) do this corruption. The agents book maximum tickets in advance with an intention of charging high price from the customers. The real passengers do not get the tickets in reasonable price and switch to another airline providing cheap tickets. The agents wait till the last moment and lose passengers. This is adjusted and shown as unsold tickets by Biman, while maximum seats are unsold and remain vacant in those flights. This unethical benefit is distributed between the agents and the culprit employees inside Biman later. Thus, Biman losses a huge amount of money every year. This corresponds with the findings of Hossain (2019). Cargo corruption, flight delay and poor inflight services are the common problems identified by the passengers. Pramitha, *et al.* (2018) have the same opinion on the product development strategy of Singapore Airlines, which is appropriate for application to Biman (Product development score=3.75 in QSPM) as well.

5 CONCLUSIONS AND RECOMMENDATIONS

The art of strategy is balancing a company's internal resources with the possibilities and difficulties brought on by its external environment (Grant, 1991). The process of formulating a strategy may be broken down into three stages: the input stage (EFE, CPM, and IEF), the matching stage (SWOT, SPACE, BCG, IE, and Grand Strategy matrix), and the decision stage (QSPM) (David & David, 2017). However, the number of passengers, income and spending have all grown steadily over time. There are insufficiently good and appropriate business and customer service plans at Biman. The company experiences huge losses each year. Passenger complaints, a lack of adequate infrastructure, and a shortage of aircraft are ongoing problems for this business.

The famous Chinese general and military philosopher Sun Tzu (544-496 BC) is credited with creating strategy. It serves as a guide for attaining the organisations' goals. Strategic management focuses on judiciously implementing and monitoring the strategies. The Strategic Management Process consists of a



number of phases. The crucial phases in the strategic management process are formulating a strategy and choosing the best one. Numerous studies have focused on the strategy formulation process using QSPM. Most likely, Sun Tzu's tactics from his book "The Art of War" have been adopted by the corporate sector. Strategic Management comprises four fundamental components, according to Wheelen & Hunger (2010). These are: environmental scanning (ii) strategy formulation (iii) strategy implementation (iv) evaluation and control. Management constantly monitor the internal external environments to examine the internal strengths with the external opportunities and threats. The strategies are formulated through the QSPM (Quantitative Strategic Planning Matrix) finally. The study is based on both primary and secondary data. The researcher had interviews with many passengers who regularly use the route of London-Dhaka-London. Various journal articles, newspapers information are taken into cogitation. The strengths, weaknesses, opportunities and threat factors are collected from interviews, newspapers and Kuan, *et al.* (2020). From the Strategy formulation analytical tool, IEF, EFE (input stage), SWOT, IE (matching stage) and QSPM (decision stage) matrices are used to find out the strategies. In IFE matrix the strengths and weaknesses cumulative figure is 2.65, which is greater than 2.5 indicating that Biman has the strong internal positions. It has the capabilities to overcome the weaknesses. IFE is 2.65. $IFE > 2.5$ indicates strong internal position. while Biman can take the grab the opportunities over the treats as EFE is 2.55. $EFE > 2.5$ indicates that the company is responding in an average way to existing opportunities and threats in its industry.

From a few newspapers reveal, (i) Mismanagement of tickets, subpar customer service, a lack of fleet planning and flight schedules, ineffective human resource management, fraud in the hiring of pilots, and corruption in the airline's revenue collection procedures are identified by the customers. (ii) A free ride for about 40 government representatives and two MPs on an experimental commercial flight between Dhaka and Toronto. There were just 36 general passengers on the Dhaka-Toronto route and only six general passengers on the return. The cost to the government for the journey, which was flown by a Boeing 787-9 Dreamliner, was close to 4 crore Taka.



Additionally, it discloses the lease of two Boeing 777 aircraft from Egypt Air, for which Biman had to bear a loss of Tk 1233 crore in tax revenue. The corruption and poor administration of Biman were also reported. (iii) Ineffective management, poor planning, faulty marketing strategy, and a lack of professionalism. Purchasing, leasing, and maintaining aircraft; selling cargo and tickets; ineffective management, etc. (iv) In most associated industries, including cargo transportation, aircraft leasing, and ticket sales, the airline is accused of engaging in corruption. (v) Evidence of corruption in industries like equipment leasing and aircraft leasing is noticeable. Additionally, it was discovered that cargo accounts were manipulated, ticket sales were irregular, and ghost vouchers were utilized to restrict seats from travel companies and profit from this arrangement. In addition, the study claims that there is proof of corruption in the selection of general sales agents (GSA). Regulations require that waiting passengers be offered hotel rooms as a temporary solution when a flight is delayed. The panel did discover proof of fraudulently generated hotel invoices, though.

IFE and EFE lines are in the offensive strategy, according to an examination of the graphic coordination of SWOT analysis. The SWOT graph's first quadrant. By acquiring market share from their competitors, businesses use offensive techniques to strengthen their competitive position. By utilizing their opportunities, Quadrant-I may be able to overcome the ambiguity of the external environmental conditions. There are many different offensive tactics, including guerilla warfare, frontal assault, flanking maneuver, encirclement, and bypass attack.

Market penetration is supported once by the IE matrix, although SWOT analysis did not, according to the results of the SWOT and IE matrices. SWOT & IE tools enable the creation of products, offensive strategies, and market opportunities. Market development receives the greatest score according to the QSPM, followed by offensive strategy and product development, which receive the second and third highest values, respectively. Market development is the process through which a business tries to align its current product production with a new goal, usually by changing some of the product's qualities. The expansion of Biman's destination to new regions will help the company's market



development (national and international). Market development, in short, is a technique used by businesses to target new markets with their current goods and services.

The interviewers made a point of mentioning Biman's corruption. Many of them discussed the so-called "Syndicate," or organized corruption. This corruption is mostly carried out by a few corrupted workers and the middlemen (agents) in the marketing channel. In order to charge clients a premium fee, the agents reserve the most tickets possible in advance. The actual passengers go to another airline offering affordable fares when they can't afford the tickets. Agents lose passengers by holding off until the last minute. Biman adjusts this and displays unsold tickets even when maximum seats on certain flights are still available and empty. The agents and the guilty workers within Biman eventually share this illicit advantage. Biman suffers enormous financial losses, as a result, every year.

Bangladesh national airlines (Biman) is one of the pioneer airlines in Bangladesh since its independence in 1971. The carrier is the national flag bearer in the sky. This study has theoretical and practical contributions. The study shows the ways to formulate strategies with a quantitative approach. The study may be helpful for the Civil Aviation Authority of Bangladesh. In general, the strategy formulation techniques for any aviation industry or other industries may be eye-openers. The authority of Biman may take necessary steps in light of this study.

Moreover, this study recommends the following strategies for the case organization:

1. Every effort must be made to eliminate the corruption in Biman. The unethical connection between the agent and the culprit employees of Biman must be stopped in order to prevent air-ticket black-marketing;
2. Biman should expand its routes to the new profitable geographical locations;
3. "In flight service must be improved. Steps must be undertaken to ensure full complement of cabin crew, professionalism among the cabin crew, and provision of proper flight crew training to ensure that quality service



can be rendered by the cabin crew at all times.” (Rahman, *et al.*, 2020, p.19).



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